

Milestones in the Evolution of the PI Class

Many pills per day
Multiple doses necessary
High toxicity

SQV
 RTV
 IDV

Improved tolerability
 Some boosted

SQV/RTV APV
 IDV/RTV NFV

ATV
 ATV/RTV
 DRV/RTV

1 pill per day (+ RTV & NRTIs)
 Boosting gold standard
Manageable toxicity

More coformulations (FDC)
Single-tablet regimens (STR)

ATV/COBI
 DRV/COBI
 DRV/COBI/TAF/FTC

Once-daily dosing
Coformulation (FDC)
 Some treatment-limiting toxicity

FPV/RTV
 LPV/RTV

PAST

PRESENT

**(Not-too-distant)
 FUTURE**

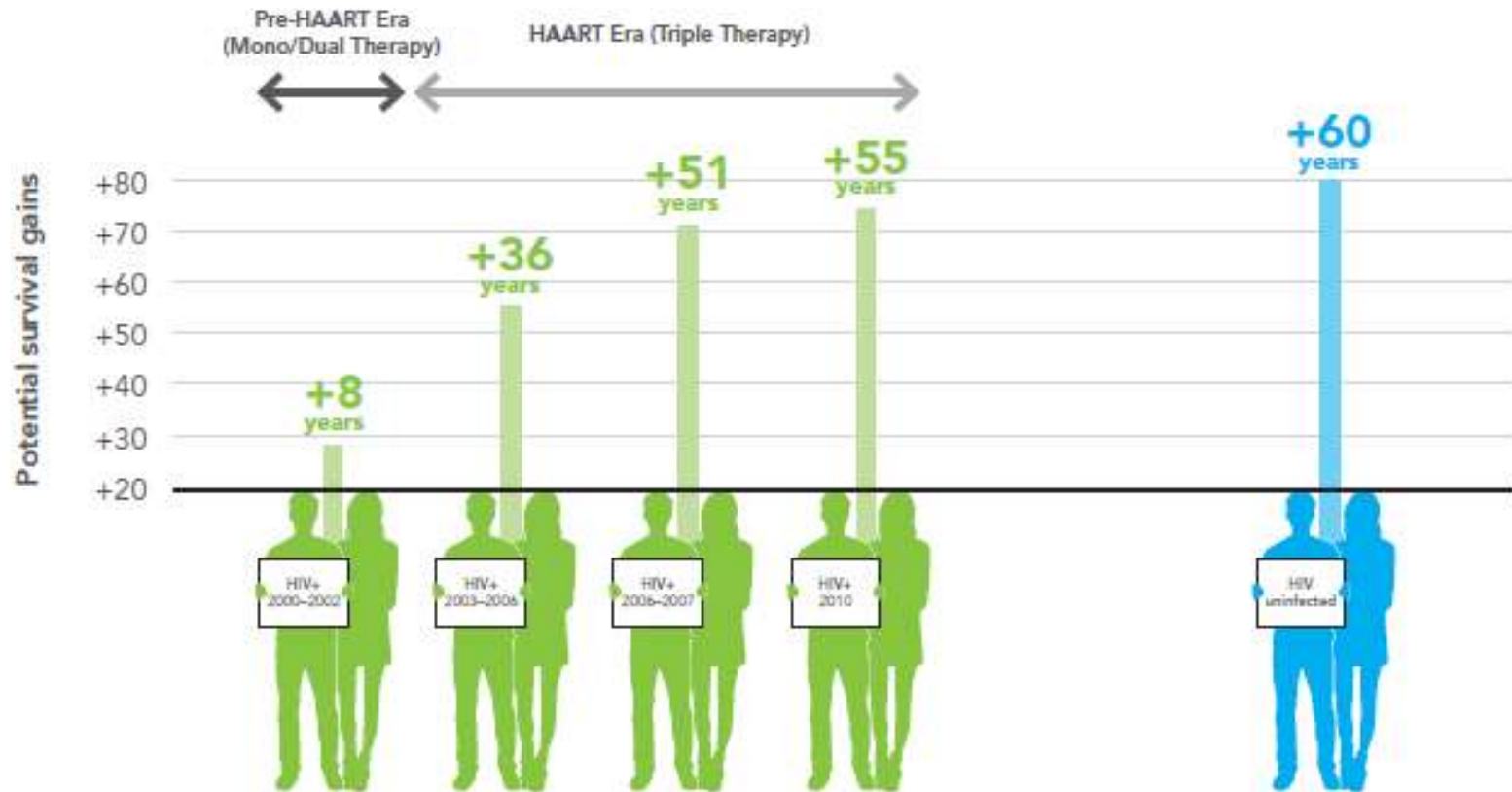


AIDS Timeline

The life expectancy of Americans with HIV is higher than ever, almost **reaching the life expectancy of the general population** -- age 78.

New medicines and treatments make it easier to manage HIV, especially if you've been diagnosed early and take care of yourself.

HIV TREATMENT CAN NORMALIZE SURVIVAL



Expected impact of HIV treatment in survival of a 20 years old person living with HIV in a high income setting (different periods)

Source: Samji H et al., PLoS ONE, 2013.



2009-2010

Polls show most Americans **no longer consider AIDS a major problem**. They're wrong. **New infections continue to soar**.

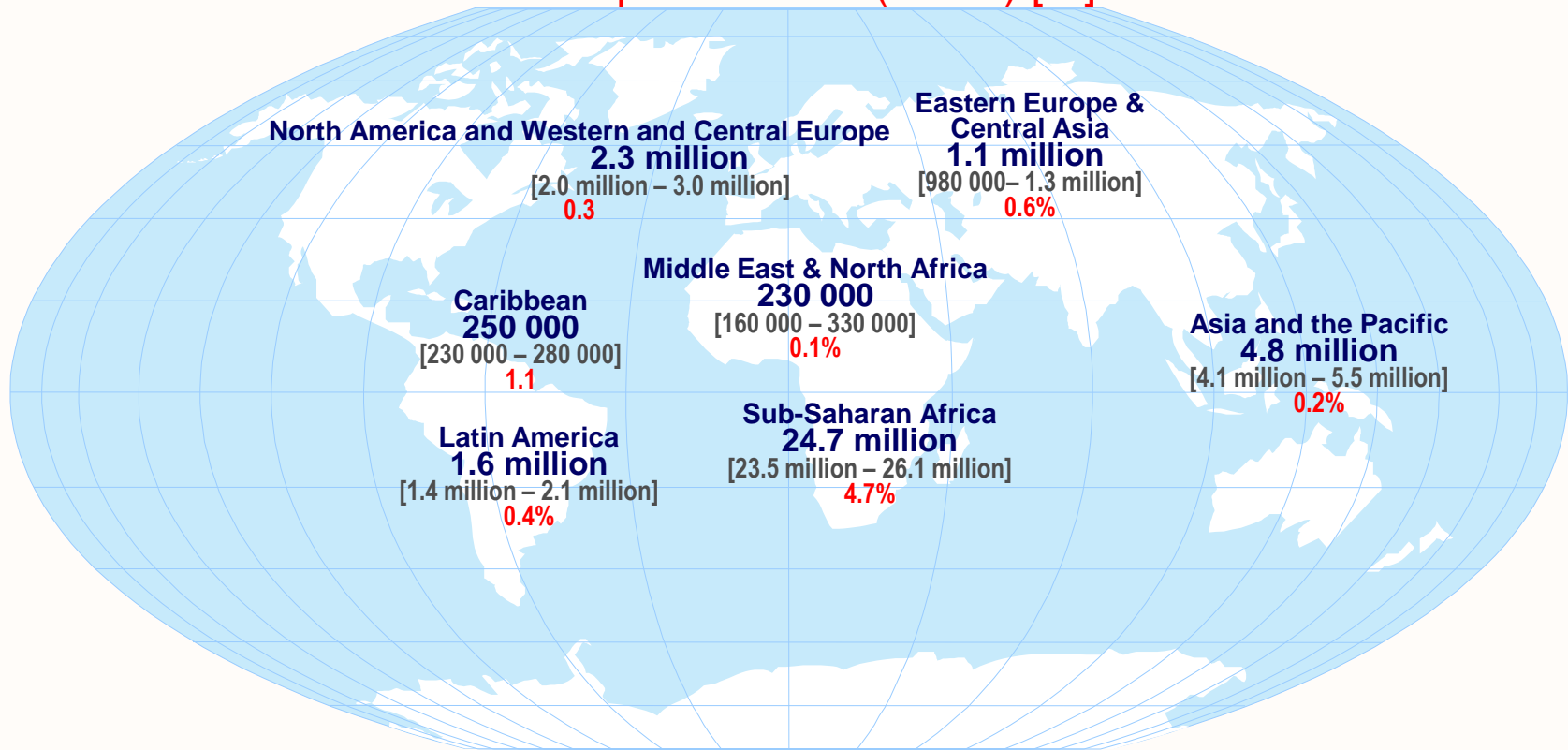


2009

UNAIDS says the global spread of **AIDS peaked in 1996** with 3.5 million new infections. **Deaths peaked in 2004**, at 2.2 million. Yet AIDS Day 2009 brings grim figures: 2.7 million **new HIV infections** and 2 million **AIDS deaths** in the previous year. **More than half of those who need it get no treatment.**

Adults and children estimated to be living with HIV | 2013

Adult prevalence (15-49) [%]



Total: 35.0 million [33.2 million – 37.2 million]



World Health Organization – HIV Department

Global summary of the AIDS epidemic | 2013

Number of people living with HIV in 2013	Total	35.0 million [33.1 million – 37.2 million]
	Adults	31.8 million [30.1 million – 33.7 million]
	Women	16.0 million [15.2 million – 16.9 million]
	Children (<15 years)	3.2 million [2.9 million – 3.5 million]

People newly infected with HIV in 2013	Total	2.1 million [1.9 million – 2.4 million]
	Adults	1.9 million [1.7 million – 2.1 million]
	Children (<15 years)	240 000 [210 000 – 280 000]

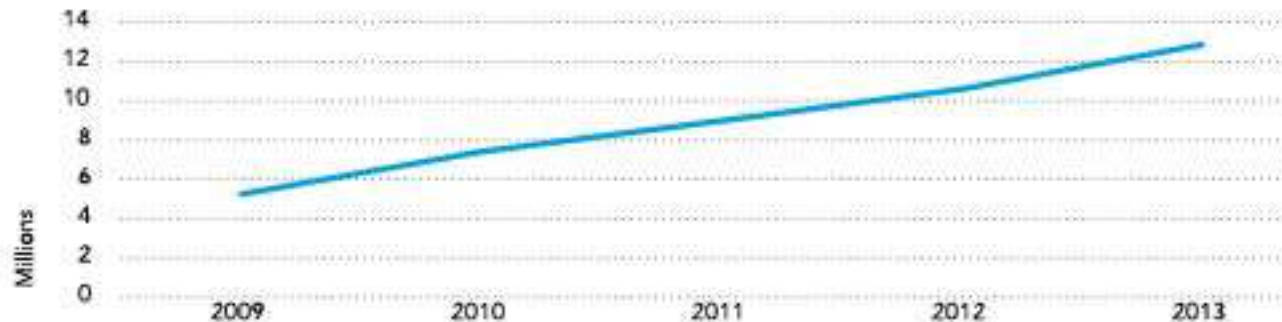
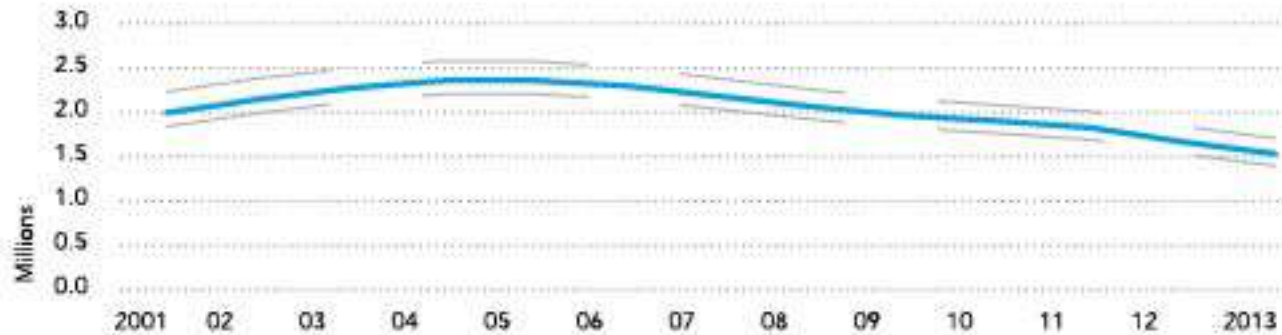
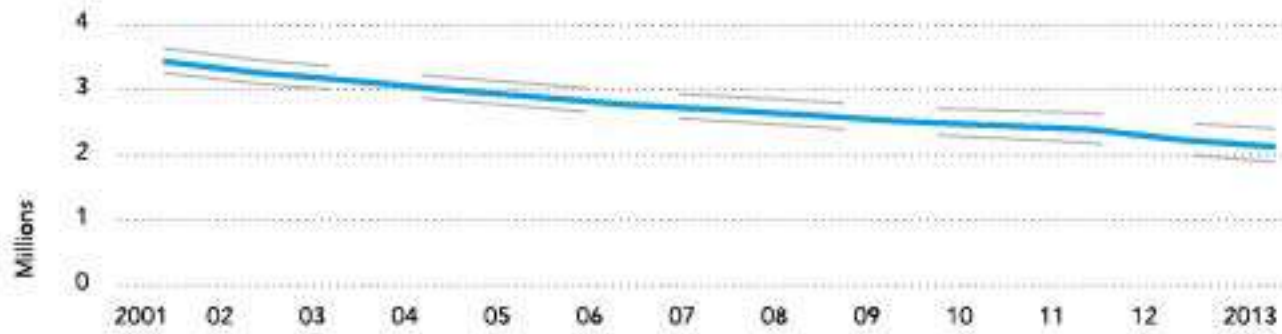
AIDS deaths in 2013	Total	1.5 million [1.4 million – 1.7 million]
	Adults	1.3 million [1.2 million – 1.5 million]
	Children (<15 years)	190 000 [170 000 – 220 000]



World Health Organization – HIV Department

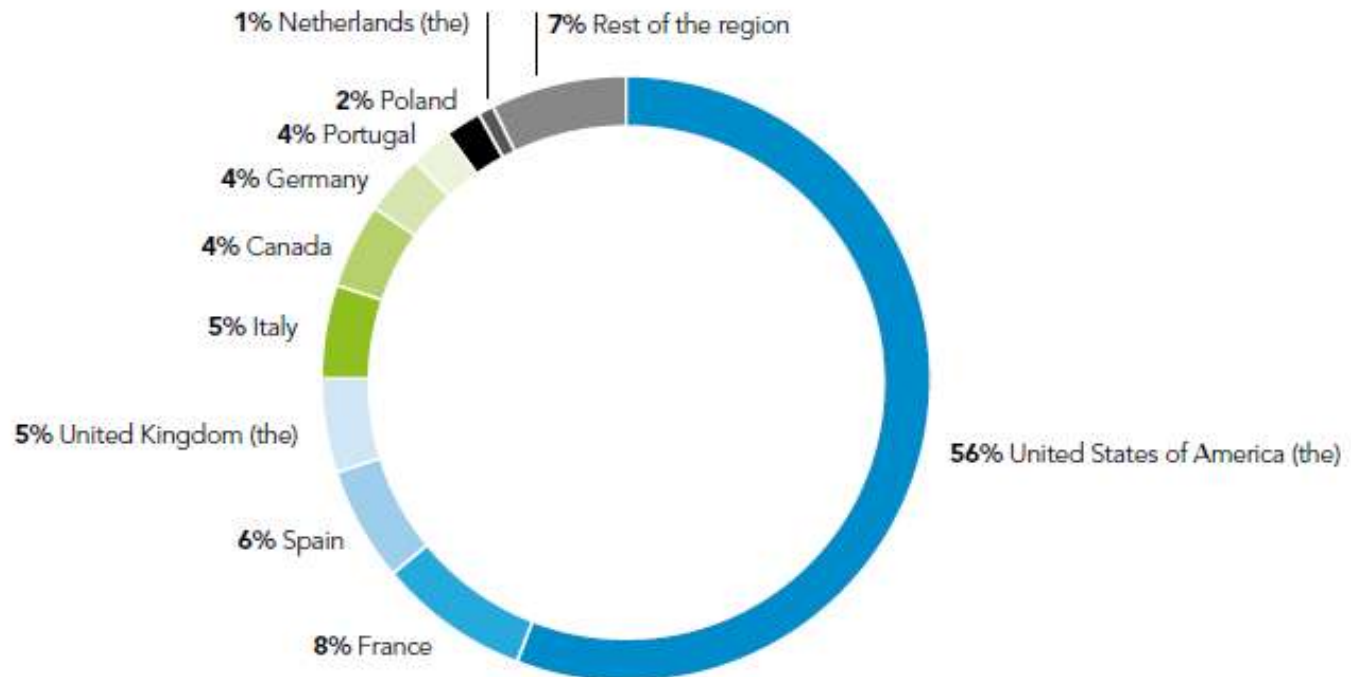
Global HIV and AIDS estimates, 2013

UNAIDS, WHO and UNICEF



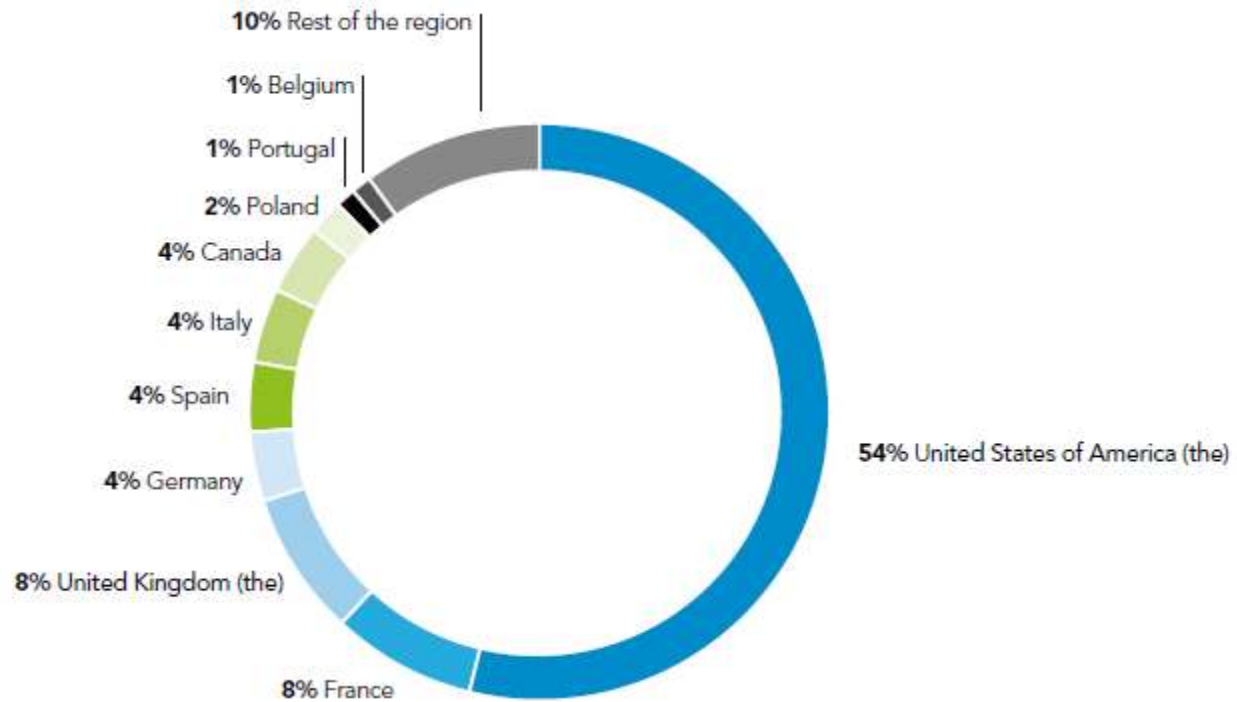
For each 10% increase in antiretroviral therapy coverage, the population-level transmission rate decreases by 1%

People living with HIV in western and central Europe and North America, 2013



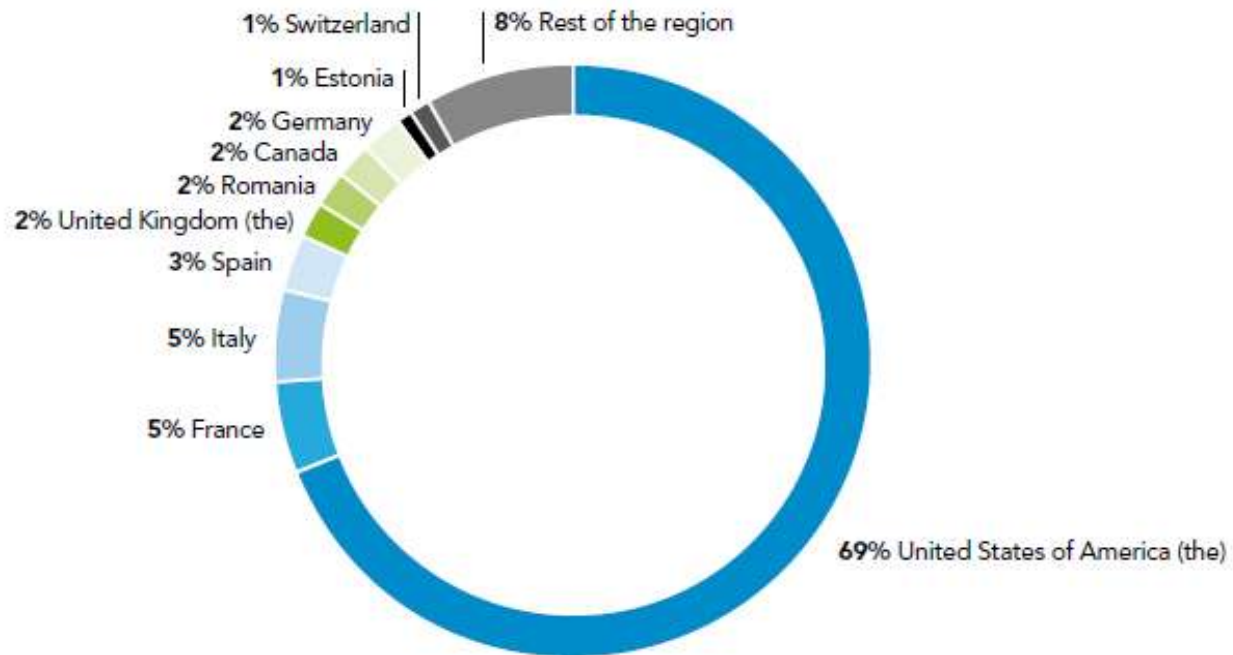
Source: UNAIDS estimates, 2013.

New HIV infections in western and central Europe and North America, 2013



Source: UNAIDS 2013 estimates.

AIDS-related deaths in western and central Europe and North America, 2013



Source: UNAIDS 2013 estimates.

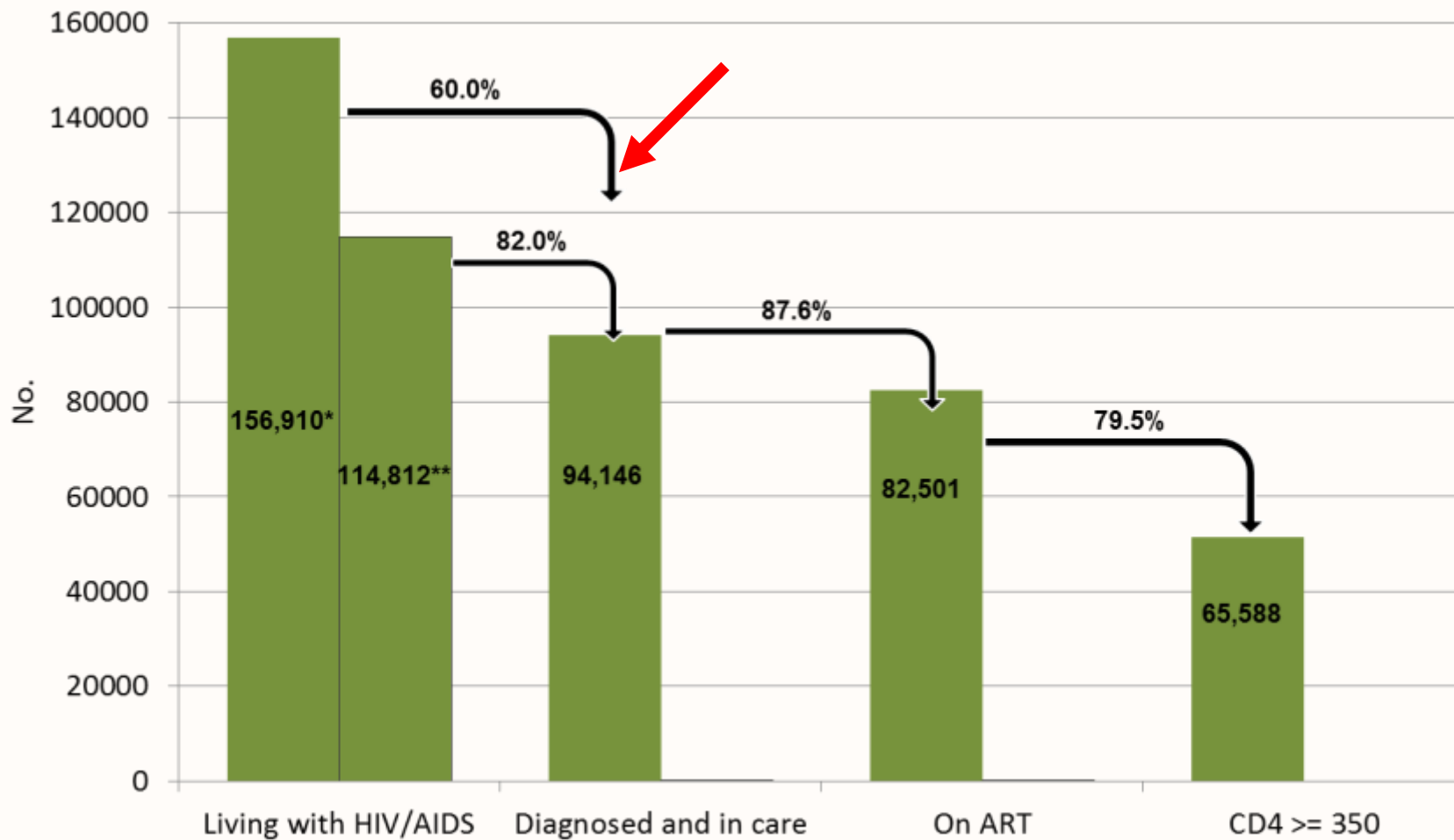
EPP/Spectrum estimates for **ITALY**, 2012

	Estimate
Number of PLHIV : adults aged 15+	123,000
Number of new HIV infections : adults aged 15+	3,000
Number of AIDS deaths : adults aged 15+	1,500
Number of individual receiving ART : adults aged 15+	93,000

Camoni L. et al, BioMed Research Int, 2014

People living with HIV in Italy by diagnosis and treatment

CASCADE



*40% undiagnosed or not linked to care

** 18% undiagnosed or not linked to care

Camoni et al, AIDS Research and Human Retrovirus, 2014